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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,719	05/02/2001	Tadayoshi Nagaoka	645-144	7027

7590 11/20/2002

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EXAMINER

OMGBA, ESSAMA

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/847,719

Applicant(s)

NAGAOKA ET AL.

Examiner

Essama Omgba

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 06 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 21-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 21-28 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of the invention of Group I, claims 1-20, in Paper No. 6 is acknowledged.

### *Claim Objections*

2. Claims 2-5, 7-10, 12-15, and 17-20 are objected to because of the following informalities: --the-- should be inserted before "steps" in line 9 of claims 2 and 7, line 6 of claims 12 and 17. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- and 11-15
4. Claims 1-5<sup>A</sup> rejected under 35 U.S.C. 102(b) as being anticipated by Pretorius et al. (US Patent 4,208,284).

With regards to claims 1, 2, 11 and 12, Pretorius et al. discloses a method for manufacturing a packing made of a three-dimensional net-like structure which constitutes an internal structure of a device which performs material transfer between gases and liquids, the internal structure being divided in a plurality of chambers

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connected to one another and the three dimensional structure being made of a plurality of unit structures which are arranged continuously in vertical and horizontal directions of the three dimensional net-like structure, each of the unit structures being formed of by converging and dispersion of the three line elements, see column 3, lines 37-52, column 4, lines 21-41, the method comprising the steps of forming a unit structure with three line elements, the unit structure consisting of a plurality of basic units each of which is a combination of two triangular pyramids having a common bottom surface and apexes disposed in opposite directions, the basic units being arranged continuously in vertical direction of the three-dimensional net-like structure with apexes of each of the basic units being in contact with apexes of adjacent basic units, and a converging section of the three line elements being formed by binding the three line elements at a point of contact of the apexes of the adjacent basic units and disposing a plurality of the unit structures in such a manner that adjacent ones of the unit structures come into contact with each other so that the adjacent one of the unit structures are in a position to form the converging section of the three line elements at each apex of the common bottom surface of the triangular pyramids constituting the basic unit, and forming the converging section of the three line elements by binding the three line elements at each point of contact of the adjacent ones of the unit structures, see column 15, lines 63-68, column 16, lines 1-24 and figures 12 and 13. Applicant should note that the unit structures of Pretorius et al. can be used as mist eliminator.

For claims 3-5 and 13-15, see column 16, lines 5-8.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6-10 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pretorius et al.

With regards to claims 6, 7, 16 and 17, Pretorius et al discloses a method for manufacturing a packing made of a three-dimensional net-like structure which constitutes an internal structure of a device which performs material transfer between gases and liquids, the internal structure being divided in a plurality of chambers connected to one another and the three dimensional structure being made of a plurality of unit structures which are arranged continuously in vertical and horizontal directions of the three dimensional net-like structure, each of the unit structures being formed of by converging and dispersion of the three line elements, see column 3, lines 37-52, column 4, lines 21-41, the method comprising the steps of forming a unit structure with three line elements, the unit structure consisting of a plurality of basic units each of which is a combination of two triangular pyramids having a common bottom surface and apexes disposed in opposite directions, the basic units being arranged continuously in vertical direction of the three-dimensional net-like structure with apexes of each of the basic units being in contact with apexes of adjacent basic units, and a converging section of the three line elements being formed by binding the three line elements at a point of

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contact of the apexes of the adjacent basic units and disposing a plurality of the unit structures in such a manner that adjacent ones of the unit structures come into contact with each other so that the adjacent one of the unit structures are in a position to form the converging section of the three line elements at each apex of the common bottom surface of the triangular pyramids constituting the basic unit, and forming the converging section of the three line elements by binding the three line elements at each point of contact of the adjacent ones of the unit structures, see column 15, lines 63-68, column 16, lines 1-24 and figures 12 and 13. Pretorius et al. does not disclose the unit structure being formed by converging and dispersion of four line elements wherein the a unit structure formed with the four line elements consists of a plurality of basic units each of which is a combination of two quadruple pyramids having a common bottom surface and apexes disposed in opposite directions. However it would have been obvious to one of ordinary skill in the art at the time the invention was made that using a four line elements, instead of three as taught by Pretorius et al., to make expanded structures is well within the general knowledge of one of ordinary skill in the art, see column 16, lines 21-24 in particular. Applicant should note that the unit structures of Pretorius et al. can be used as mist eliminator.

For claims 8-10 and 18-20, see column 16, lines 5-8.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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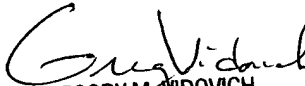
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (703) 305-2915. The examiner can normally be reached on M-F (10-7:30) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on (703) 308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3579 for regular communications and (703) 305-3580 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

eo

  
November 13, 2002

  
GREGORY M. VIDOVICH  
PRIMARY EXAMINER